

**PRE-SERVICE TEACHERS' PERCEPTION TOWARDS THE UTILIZATION  
OF SOCIAL MEDIA FOR COLLABORATIVE LEARNING IN FEDERAL  
UNIVERSITY OF TECHNOLOGY, MINNA.**

**BY**

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**2017/3/69254BE**

**DEPARTMENT OF SCIENCE EDUCATION  
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION  
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**

**AUGUST, 2021.**

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**A PROJECT SUBMITTED TO THE DEPARTMENT OF SCIENCE EDUCATION  
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION  
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGERIA  
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## **Abstract**

*This study is aimed to examine pre-service teachers perception towards the utilization of social media for collaborative learning. The study involves a cross-sectional type of survey design. The study consists of 134 pre-service teachers in Science Education Department of Federal University of Technology, Minna, which were drawn through simple random sampling technique. Four research questions were posed and answered in the study. To achieve this, a validated questionnaire was distributed to the 134 pre-service teachers of the department. The data collected were coded and analyzed through descriptive statistics using mean and standard deviation. The findings of the study show that the pre-service teachers have positive perception of social media as a learning tool for collaborative learning. The findings also show that the pre-service teachers have the intention of using social media in their teaching. This study recommend that The school should provide adequate orientation, motivation and training for pre-service teachers to acquire relevant skills to maximally benefit from online teaching and learning through social media.*

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## **CHAPTER ONE**

### **1.0**

### **INTRODUCTION**

#### **1.1 Background to the Study**

The rapid growth and development of emerging mobile technologies in recent years has resulted in numerous modifications in the present generation's social, economic, and cultural lives; these have, in particular, altered the communication structure of today's media world from the emergence of an open social platform such as social media, that provides an effective means for communication, collegiality, and collaboration. Users can utilize social media platforms to find, produce, share, collaborate, and organize content within themselves, while also providing digital self-presentation and self-disclosure.

Social media has been described in various ways. For instance, Aksoy (2018) sees Social media as a virtual space wherein individuals get together in order to share information about their relationships and content via internet communication networks "Social Media" is a broad concept. Online tools that allow people to communicate with others by exchanging and receiving information from them are known as social media (Iqbal et al. 2017). Social media are platforms which enable people to share information, ideas, and pictures/videos in hidden communities and networks such as Facebook, Instagram, Badoo and Twitter among others (Apuke2016).

Social media networks such as Facebook, Instagram, LinkedIn, and Twitter have drawn the attention of a considerable number of young people since its inception, with many of them integrating these social sites into their daily lives (Li et al. 2010). Many students are now fully involved in social networking sites, paying little attention to their academic activities as a result

of their increased time spent on these platforms. They are highly associated with internet social communications and have developed a set of social networking abilities such as , rating, blogging, tagging, , and commenting. The purpose of these social channels is to facilitate collaboration and networking as well as the creation of knowledge and material, which has a lot of value in the context of educational institutions. Social media is playing an increasingly important part in the teaching-learning process. Besides providing important information, it also links students to learning communities as well as other educational establishments, making the whole process of learning more engaging and interesting (Jain, 2019). As a result of social media, students become more self-directed in their learning, which prepares them to find answers on their own and make decisions on their own. These social media abilities can be directed and polished in the classroom to achieve greater learners ' performance and critical awareness.

Learning is a process that enables an individual to gain skills, knowledge, and experience to handle a given task. The core aim of learning is largely hinged on the extent to which learners were able to established a task effectively. Learning can take place in different forms, and the emerging role of social media is altering how students share information or learn. Rather than being merely passive consumers of information, students in higher education actively participate in the creation of knowledge. Viewing education as a societal activity in general, numerous educators throughout the world have begun to recognize the value of social media in improving and increasing the learning experience. (Alenazy *et al.*2019).

Many instructors believe that independent learning is a good intellectual method. Organising learning in such a way that allows learners the opportunity to respond to each other's ideas, collectively build a product, and even teach each other is an effective strategy in itself. In recent times, many educators have been adopting the collaborative learning strategy using latest



technologies and social media. Collaborative learning is a teaching and learning strategy where in groups of students work collectively to achieve a given task (Laal & Ghodsi, 2012). It is a teaching style that encourages collaboration among students, instructors, and administrators. It is considered to be one of the most appropriate instructional strategies, and it entails techniques and contexts wherein students perform a collective activity, each relying on and responsible to the others (Alenazy et al.2019). This teaching style allows students to be active and communicate their thoughts with the rest of the group members. For a more pleasant learning environment, the strategy encourages useful and productive communication and interaction between individuals or groups (Hamid et al. 2012).

Several studies have been conducted to explore students use of social media in learning and in collaborative learning. However, there is paucity of studies on students' perception on social media as a tool for collaborative learning especially in Nigeria. This has necessitated this study to fill the research gap. Therefore, the focus of this study is to examine pre-service teachers perception towards the utilization of social media for collaborative learning.

## **1.2 Statement of the Problem.**

The need for educational institutions to employ new modes of teaching and learning have been prompted by the latest improvement in the field of communication technology. In recent times, many educators have been adopting the collaborative learning strategy using latest technologies and social media. Collaborative learning is effective in improving academic performance, developing critical mindsets and improving problem solving, both in the personal and current learning context. .Li *et al.* (2010) opined that the utilization of social media for

collaborative learning is thought to boom students' engagement and motivation, for the reason that it has already won its recognition and performed a crucial function in students' daily life.

In practice, educational institutions, especially in Nigeria, still rely mainly on traditional learning systems which do not fully utilize the potential of social media to participate in global collaboration and learning networks. This is evidence during the covid-19 pandemic where most higher institutions in the country were unable to adapt to online learning through technology mediated devices and social media sites. However, the adoption of online learning through social media sites in the country is still at its early stage. It is on this note that this study tries to examine pre-service teachers perception towards the utilization of social media for collaborative learning

### **1.3 Aim and Objectives of the Study**

The aim of the study is to examine the perception of pre-service teachers towards using social media for collaborative learning in Federal University of Technology, Minna. However, the specific objectives which the study tries to achieve are:

1. The pre-service teachers' perception towards the utilization of social media for learning.
2. The pre-service teachers' perception towards the utilization of social media for collaborative learning.
3. The pre-service teachers perception towards the utilization of social media for collaborative learning based on gender.
4. The pre-service teachers' intention of using social media for teaching in future.

#### **1.4 Research Questions**

1. What are the pre-service teachers' perception towards the utilization of social media for learning?
2. What are pre-service teachers' perception towards the utilization of social media for collaborative learning?
3. What are pre-service teachers perception towards the utilization of social media for collaborative learning based on gender?
4. What are the intentions of pre-service teachers of using social media for teaching in future?

#### **1.5 Significance of the Study**

The findings from the study will be significant in the following way;

Firstly, the study will be of benefit to the school management and teachers.

It is hoped that the opinions and views expressed by the pre-service teachers in this study will persuade the school management and teachers to implement and adopt social media in the current educational system of the university.

Secondly, the study will also be of benefit to the management and teachers in the area of course development.

It is hoped that the finding of this study will provide information to the school management and teachers regarding the willingness of the pre-service teachers to adopt social media in teaching.

This could encourage the school to develop course contents that will equid learning.

Thirdly, the study will assist individuals who intend to carry out further researches in this area.

It is hoped that the findings of this study will serve as a basis to build on further researches in areas such as how students will effectively use social media in learning particularly in collaborative learning.

## **1.6 Scope of the Study**

This study focuses on the perception of pre-service teachers towards the utilization of social media for collaborative learning in Federal University of Technology, Minna. Therefore, the study is restricted to pre-service teachers of Federal University of Technology, Minna as the study sample. The study also considers gender variable to determine whether the pre-service teachers' perception of social media for learning varies based on this variable. The accomplishment of the study will run for six months of first and second semester during the 2019/2020 academic session.

## **1.7 Operational Definition of Terms.**

**Learning:** Learning is an activity in which one's knowledge and attitude change as a result of their experiences.

**Learning tool:** Wide range of educational resources that help students to learn.

**Collaborative learning:** Collaborative learning is a teaching and learning strategy where in groups of students work collectively to achieve a given task.

**Perception:** It is a way of thinking about, understanding, or explaining something.

**Pre-service teachers:** Refers to a teacher trainees enrolled for the teacher preparation course to obtain a teacher certificate.

**Social media:** platforms which allow individuals to build content material or interact with social networks.

## CHAPTER TWO

### 2.0 REVIEW OF RELATED LITERATURE

This chapter will focus to a review of relevant literature for this study. The following sections of the review are discussed:

#### 2.1 Conceptual Framework

##### 2.1.1 Concept and Meaning of Perception

Perception has been described in different ways since its first usage, as have most concepts within the social science disciplines. In a simple terminology, perception is the manner in which somebody think and feels about something. Perception is defined in philosophy, psychology, and cognitive science as the process of becoming aware of or comprehending sensory information. The term "perception" is derived from the Latin word *percipio*, meaning to receive, collect and comprehend with the mind.

What we do in the world relies upon how we comprehend our place in it, relies upon how we see ourselves and our social and actual climate, relies upon how we see our conditions. As a result, everyone of us view the surroundings around us differently. It is our own view of that reality that shapes and coordinates our practices, and some target comprehension of outer reality. For instance, in the event that one individual on a slope sees that it is cold, he will go after his sweater. Then again, if the individual remaining close to him sees that it is warm, he will pull off his sweater. These opposing practices can be observed occurring simultaneously, paying little heed to the real encompassing temperature as estimated by a thermometer.

Our perceptions differ from one individual to another, and the significance we take from those perceptions differs. This account for the reason why individuals have various preferences

for music, workmanship, design, garments, and so on. Different individuals view things differently in a similar circumstance. Yet, more than that, we allocate various implications to what we see. Two individuals with similar tested seeing and hearing will in any case have various preferences for what they like to see and hear. The manner in which we see our general surroundings differs and is just about as one of a kind as our individual characters. Despite the fact that we may take a gander at a similar picture, what we comprehend will differ contingent upon various elements, including what we hope to see. Essentially, perception is an extremely fascinating feature of life and business.

### **2.1.2 Process of Perception**

Perception is a grouping of stages initiated by stimulus factors in the surrounding and ends with our translation of those factors. The perception interaction comprises of three phases: selection, organization, and interpretation.

#### **1. Selection:**

Selection is the initial phase of the perception process, during which individual change the surrounding stimuli into meaningful experience. In every day life, we are assaulted continually by such a huge assortment of information that at a squint second we might experience these stimuli. Since our reality accepts everything, these are countless factors showing up at our tangible organs at the sametime and holding on to be handled. In any case, we can not perceive all the information accessible to us, on the grounds that in doing as such we would encounter data over-burden and confusion. In this manner, we perceive just piece of the information from the surrounding through a particular process.

Some people compare this process to the creation of a map. when creating a map, one cannot place everything into it, instead, they need to generalize or delete unnecessary or unimportant information, while the important ones are marked in the map. It would be difficult to a create a map otherwise. Also, when being confronted by a number of contending stimulus factors, we selectively focus our attention to those we are familiar with.

## 2. Organization

The organization of information is the second phase in the perception process. The information gathered from the surrounding must be organize by identifying meaningful patterns. This stage is accomplished by categorizing things or people, which is why some researchers refer to it as categorization. During this phase, the events or items we experience in the surrounding will have shape, shading, surface, size, and so on. There are two distinct characteristics to perception at this phase. The process of organization gives the human mind a framework to structure and transform raw stimuli from the surrounding into meaningful experience. Secondly, the process demonstrates that human perception has a degree of stability. As a result of selecting stimuli and categorizing them, they become durable.

## 3. Interpretation

When it comes to perception, the selection and organization of stimulus factors occurs very rapidly without consciousness. The third phase in the perception process is interpretation, which involves assigning meaning to our experiences through the use of mental structures called schemata. Schemata is the database we use to interpret the stored information of the new experience. We all have fairly complex schemas: over time, small units of information combine to form more meaningful information complexes. Understand the patterns of the schemas is important because our interpretation affects our behavior.



Suppose you're working in group with a shy group member, and you believe that shy people don't do well in public presentations because of your preconceived notions about how shy people communicate, you might decided not to assign them presentation responsibilities. Schemata provide a script for our interactions. When we interact with someone or a group of people or a place, we use schemata to filter our perceptions.

### **2.1.3. Factors Influencing Human Perception.**

Perceptual Sets are influenced by three factors: the Perceiver's characteristics, the perceived characteristics, and the situational characteristics.

#### **1. Perceiver's Characteristics**

There are several personal qualities that influence how someone interprets what they see when they look at a target.

##### **i. Needs and Motives:**

The way we perceive things is influenced by our need patterns. Individuals are stimulated by unmet needs or reasons, which can have a significant impact on their view. Because of this, people engage in wishful thinking as a means of satisfying their desires in an imaginary world rather than the real reality. People will only perceive elements that fit their desired thinking in such situations. People's perceptions are also influenced by their motivations.

##### **ii. Self Concept**

A person's self concept is determined by how they view themselves, which in turn affects how they view others and their environment. We are better equipped to see others when we have a better understanding of ourselves. Those who are more secure, for example, are more likely to

see others as friendly and warm-hearted. People who are less secure frequently point out flaws in others. Factors that contribute to accurate perception include accurately perceiving ourselves and improving our self-concept.

iii. Past Experience

The way a person views the current circumstance is shaped by his personal encounters. If an individual has previously been deceived by friends in the past, he is likely to be suspicious of any lifelong friendship he is going to develop.

iv. Current Psychological State:

The Way things are viewed is prone to be affected by a person's mental and emotional mindset. Unhappy people are more prone to see things differently than happy people. Also, if a person is terrified by a snake in the garden, he is liable to mistake a rope underneath the bed for one.

v. Beliefs:

As a result of a person's beliefs, his perception is significantly influenced. Untruth is not defined by what it is but what someone thinks it is. Usually, the person filters out stimuli to avoid upsetting his preexisting ideas.

vi. Expectations:

Perception is influenced by expectations. When someone expects a certain conduct from others, they're in a state of anticipation. When it comes to the product's technical features, a technical manager may assume that the non-technical employees are ignorant of them.

## vii. Situation

Time, location, light and heat are all environmental factors that influence a person's perspective. Viewing objects or events in their context is crucial.

## viii. Cultural Upbringing:

Morals, attitudes, and cultural upbringing all have a part in a person's view of others, as well as their own. Because our opinion is based on our own norms, it is difficult to understand the personality of someone from a different culture.

## **2. Perceived Characteristics**

A human's features can influence what is perceived. That our judgments of people are affected by their physical attributes such as appearances, age, sexual identity and communication style as well as personality or other behavioural patterns cannot be disputed even if it goes against logic and objectivity. It is much more likely that vocal persons will be recognized in a gathering than silent ones. It's the same with egregiously handsome and egregiously ugly persons. It's common to group together comparable people/objects/events. People who wear business attire are often considered to be specialists, while those who wear casual clothing are considered to be lower-level employees.

Communication style, both verbal and non-verbal, affect our perception of others. Word choice and precision can give clues to someone's education and sophistication, for example. The tone of a person's voice conveys their mood. People's intelligence can be gauged by the depth of their discourse and the topics they choose. Even the way a person sits and the way his eyes or smile move can tell you whether they're uneasy or self-assured.

Another factor that affects perception is a person's social standing or occupation. While meeting a school principal, a judge of a high court or the Supreme Court, we generally behave more respectfully. Because of the way others describe a person, our perception of them can be skewed. People who are warm and welcoming are treated differently than those who are cold and calculating.

### **3. Situational Characteristics**

Viewing objects or events in their context is crucial. In addition to the physical, social, and organizational setting of a situation or event, our perception is influenced by the surrounding environment and the factors that are involved in it. If you see someone for the first time and he is with someone you appreciate and respect, you will have a more favorable impression of him than if you see him with someone you despise.

When it comes to deciding the behavior of an event, the location is also a key aspect. So, a conversation with the boss which occurs in a friendly reception area may be interpreted differently than a conversation that takes place in the boss's closed office. Personnel behavior is affected by the organizational environment as well. Employees become more trustworthy and less defensive when given the opportunity to interact in a nice and social work environment.

#### **2.1.4 Social media**

Social media are computer programs that enable individuals to share or exchange information, ideas, photographs, videos, and other types of media with one another across a network (Siddiqui & Singh, 2016). Various forms of internet communication are used to construct networks, groups, and collectives to share information, ideas, messages, and other content. This definition highlights two points:

- i. Social media must incorporate online communication, which means that its history cannot begin before the internet's inception and widespread acceptance; and
- ii. Social media relies on user-generated content. This is why traditional websites and blogs are excluded from the social media world.

Only certain persons are allowed to publish on these sites, and the types of content that can be uploaded are severely limited. We can define social media platforms to be a wide range of things with this description, including messaging apps like WhatsApp and Viber, profile-based platforms like Facebook and LinkedIn, video portals like YouTube, and email clients like Gmail. The concept of social media is based on how people know and engage with one another. It empowers people to share, making the world more open and connected to one another. Nowadays, social media is an integral aspect of one's life, from shopping to electronic mail, education, and business. It has a significant impact on our lives because it aids much in all aspects of life, including politics, economics, and education.

### **2.1.5 The Growth and Development of Social Media**

Many private and public groups were striving to find ways to get computers to connect with one another in the 1960s and 1970s, which is when the internet got its origin. In some ways, this might be regarded as the birth of online social media. Personal computers did not become more common until the 1980s, and especially the 1990s, which paved the way for the creation of social media. In addition, the rise of blogging in the 1990s aided users in the social media era. People began to realize how important the internet was when they realized an average person could log on to the internet at any time to write about their thoughts or feelings or personal news, and that anyone at any time could view these messages and reply to them. In the 20th century,

technology began to evolve at a tremendous pace. To construct networks connecting supercomputers, scientists and engineers began developing methods in the 1940s, which would later lead to the creation of the Internet. Internet's earlier manifestations, such CompuServe, were created in the 1960s. During this time, primitive kinds of email were also developed. Users were able to communicate via a virtual newsletter in the 1970s as networking technology improved. Towards the end of the 1980s, personal computers became more prevalent, and social media became more advanced. They were initially used in 1988 and remained popular for the rest of the decade. It was in 1997 that Six Degrees, the first well-known social networking site, was founded. There was an option for users to create a profile and become friends with other users. A social media phenomenon began in 1999 when the first blogging sites became popular. Because of the advent of blogs, social media became increasingly popular. Many popular social networking sites emerged in the early 2000s, such as MySpace or LinkedIn, while photo sharing sites such as Photobucket and Flickr became popular. Since YouTube's launch in 2005, users have had a whole new way to communicate and share with each other over long distances, thanks to the service. It wasn't until the year 2006 that Facebook and Twitter were available to users around the globe. On the Internet, social networks such as Facebook, Twitter, and LinkedIn continue to be quite prominent. To address certain social networking voids, other sites such as Tumblr, Spotify, Foursquare, and Pinterest began to appear.

A wide range of social media sites exist today, and many are interconnected so that cross-posting is possible across them. There is a large number of people that can be reached while maintaining the intimacy of one-on-one conversation. In the next decade or perhaps 100 years, we can only hypothesize about what social networking will look like, but it is evident that social networking will exist in some form as long as humans are alive.

### 2.1.6 Types of Social Media

Social networking sites are web-based services that enable users to

1. create a public or semi-public profile within the system,
2. identify persons with whom they have a connection, and
3. browse and traverse their list of connections as well as those generated by others. offline world to stay connected despite physical distance, time differences, and other context-specific constraints.

This is a place of socialization for common groups, groups in practice, or groups connected by a common interest or concern For example, Facebook, WhatsApp, LinkedIn e.t.c are social networking platforms.

**2. Media Sharing Websites:** These websites allow users to upload and share multimedia files (photos, movies, music) with others on a website that can be accessed from anywhere in the world. Many media sharing websites also allow users to upload media to other websites. YouTube, Instagram, and other similar sites are examples.

**3. Discussion Forum:** Perhaps the earliest form of social media platform is the discussion forum. On these platforms, people can engage in dialogue by posting messages. As an example, online forums can be used to help students review content before an assignment or exam, engage students in discussion about course material before class, and reflect on material that they have previously read or worked with. Students and instructors can engage in meaningful conversation in discussion forums. Discussion encourage active learning by including students in conversations, allowing them to reflect on their own ideas or those of others, and creating a sense

of community inside the course through their participation. Quora is an example of this type of site, where individuals connect with one other to share and learn.

**4. Social Bookmarking Sites:** On these sites, users can store and share their favorite internet bookmarks in a consolidated location. Annotations, tagging, social cataloguing, and commenting are common features of such a website. With virtual bookmarks, users may search for websites of interest, find them, collect them, and organize them. Pinterest, Reddit, Pinboard, Digg, and other social media sites are examples.

**5. Social Blogging:** As a medium of communication, blogging relies on the Internet. They are often updated webpages containing a sequence of archived postings, usually in reverse-chronological order. However, they may also contain photographs or other forms of multimedia information. Hypertext connections to other Internet sites are common in most blogs, and many of them allow readers to leave comments on the posts. Examples include Medium, WordPress, and guest blogging, among others.

### **2.1.7 Commonly Used Social Media Sites in Teaching and Learning**

**1. Facebook:** Students can ask and answer questions on Facebook. While working on schoolwork at home, students can post a question to the groups and have it answered by a fellow group member. On the flip side of things, it's perfect for teachers to put movies and other resources on the group's wall so that students may access them before class or when they're working on assignments.

**2. Twitter:** Students can use Twitter to send class announcements and reminders, as well as real-time information on field trips. Students are able to keep track of information on a variety of topics with the help of this app. Twitter, for example, can provide up-to-date information for a



class discussing a current event or a career area, avoiding the need for considerable research. Many organizations offer twitter chat sessions for students to participate in.

**3 WordPress:** When it comes to communicating with their pupils, WordPress has become one of the most popular tools for teachers. Teachers can use Chalkboard to describe goals and objectives while still giving fantastic graphics to pupils. Inspire students to write more by having them build their own blogs and meet the WordPress Challenges, and teachers may utilize it to motivate students to write more.

**4. Blogger:** With Blogger, teachers and students may communicate using customized themes and journal-style writing. Students who have access to the links, lessons, and ideas provided by their teachers are more likely to succeed and feel more comfortable with the teacher when they are learning on the internet.

**5. YouTube:** A great flipping classroom option like Facebook is YouTube. Students can watch lectures and other resources before entering the classroom. If students know that their work will be seen by a larger audience, they'll be more motivated to do their best. They will also enjoy being able to express their creativity as they get to know the course material better.

**6. TeacherTube:** All types of instruction are covered on TeacherTube, from the basics to more complex topics. A few of its most useful resources can be found under its tabs for documents and music. Teachers can utilize TeacherTube to communicate with their students, and there's no doubt that this is an educational format.

**7. Instagram:** Students adore Instagram for a variety of reasons, the most important of which are the photographs and effects available to them. Teachers might design tasks that capitalize on students' desire to use Instagram, such as photo essays in which students shoot photographs, post

them, and add captions, or students can build campaigns for certain organizations or simply for a class.

**8. Pinterest:** Pinterest, the popular photo-sharing site, may be used as a teaching and learning tool as well. It also encourages teachers to work together quickly on a variety of topics and interests. It is possible to create a Pinterest page for a single class or a series of lessons, and pin images related to the lesson.

**9. LinkedIn:** When it comes to LinkedIn, it's more than just a professional social network where businesses may interact with applications or find possible workers. To keep them grounded in reality, students can post their professional resumes on the site. Then, they can be contacted for advice on the job market and the business world.

**10. Google Docs:** A popular technology among teachers and students is Google Docs. Among other things, students and teachers can collaborate using these platforms on assignments, projects or newsletters, among other things. Several people can work on the same document simultaneously. Google docs can be used to encourage collaboration.

**11. Google+:** Teacher-to-student communication made easy with Google+'s circles. One lesson might need to be revisited since students did not grasp it the first time around. They will feel more comfortable if you put them in their own circle with the correct equipment.

**12. Google Classroom:** Using Google Classroom, teachers may create assignments, collect student work, grade and return graded papers. They wanted to get rid of paper in classrooms and make digital learning possible, so they came up with the idea of creating it. If used with Chromebooks in classrooms, it would allow the teacher and students to share information and tasks more efficiently.

### **2.1.8 Role of Social Media in Learning**

Due to the fact that many kids are already familiar with social media and technology, incorporating them into the classroom is more natural than ever. From sharing announcements to holding live lectures, and so much more, each social media site offers many various possibilities to be used in the classroom ( West, 2021). Facebook, LinkedIn, Twitter, YouTube, and Instagram are just a few of the social media networks that practically everyone uses. The purpose of these social channels is to facilitate collaboration and networking as well as the creation of knowledge and material, which has a great deal of value in the context of educational institutions. Social media is playing an increasingly important part in the teaching-learning process. Besides providing important information, it also connects students to learning groups and other educational systems making their whole learning process more fascinating and engaging (Jain, 2019). As a result of social media, students become more self-directed in their learning, which prepares them to find answers on their own and make decisions on their own. When these social media skills are reinforced in a classroom setting, they can be guided and refined to produce better learning outcomes and critical awareness. Using social media gives students more flexibility in terms of connecting and collaborating outside the classroom (University of Arizona Global Campus, 2020). Social media also encourages learning by providing tools for sharing documents, such as Google Docs, Google Drive, and Box.com.

### **2.1.9. Concept and Definition of Collaborative Learning**

Individuals gain skills, information, and experience through the process of learning. Although many instructors believe that independent learning is a good intellectual method. Organising learning in such a way that allows learners the opportunity to respond to each other's

ideas, collectively build a product, and even teach each other is an effective strategy in itself. Simply said, collaborative learning is a broad word that encompasses a wide range of educational methodologies that involve students or students and teachers working together on intellectual projects. Typically, students are working in groups of two or more to find insights, meanings, or answers, or to create something. Students' exploration of the course information rather than merely the teacher's presentation or explanation of it is the focus of most collaborative learning exercises. People who participate in collaborative learning, on the other hand, take advantage of one another's resources and talents (such as asking for information, analyzing one another's ideas, etc.). Conversations in person and on the internet are included (online forums, chat rooms, etc.). If students engage in teams to explore for understandings, meanings, or solutions, or to create an artifact of their learning, then they are engaging in collaborative learning.

#### **2.1.10 Types of Collaborative Learning**

##### **1. Think-pair-share**

One of the most prevalent methods of collaborative learning is think-pair-share. Learners are expected engage in independent work , communicate their views with others, analyze peer comments, and eventually engage in discussions in a way that begins to synthesize an exchange in this type of learning. This necessitates learners taking action rather than simply listening, which is why teachers frequently summon a student at random to give their thoughts.

##### **2. Formal collaborative learning**

This style of collaborative learning is focused on how learners organize themselves in a learning environment, and it is one of the most common collaborative learning approaches. Learners are organized into specialized groups in formal learning groups, and they are obliged to stay together

for several weeks or months working on a large project (s). In general, this form of collaborative learning occurs when students study and comfortably use multiple techniques to working together.

### **3. Informal collaborative learning**

Informal learning groups are another sort of collaborative learning that is focused on how learners are arranged in a learning environment. this is when a class is broken up into smaller pieces and each group is given a project. As a result of this type of approach, lecturers spend less time lecturing and students retain more content as a result.

### **4. problem-based learning**

often known as PBL, is a style of collaborative learning in which learners are assigned a specific problem to address over a set period of time, usually in groups. Before presenting a solution or answer, students must have a thorough understanding of the problem at hand. PBL begins to resemble the type of work students undertake and the manner in which those students must tackle problems on a daily basis.

### **5. learning Jigsaw collaborative**

It is called jigsaw learning because it breaks down a learning difficulty into smaller pieces that can be dealt with by different groups inside a given learning environment. As the name suggests, It is intended that each group will provide a report and contribute suggestions in order to come up with a solution to the challenge at hand. When working on a large project, this style of learning is ideal.

### 2.1.11 Elements of Collaborative Learning

Collaborative learning is more than just students working in groups. A learning activities is only considered collaborative learning if the following aspects are present:

1. **Clearly perceived positive interdependence;** members are required to on one another in order to attain a goal. Each team member is held accountable if he or she fails to fulfill their responsibilities. As a result, all members must believe that their success depends on the success of the others.
2. **Considerable interaction;** Individuals assist and encourage one another to learn. As a result, they explain what they know, as well as accumulate and share knowledge. Individuals in a group must be able to communicate with each other in a way that encourages them to learn and grow.
3. **Individual accountability and personal responsibility;** Each student in a group is responsible for accomplishing their fair part of the work and mastering all of the content.
4. **Social skills;** Students are encouraged and assisted in developing and practicing skills such as trust-building, leadership, decision-making, communication, and conflict resolution.
5. **Group self-evaluating;** Members of the team define group goals, assess what they do well as a team on a regular basis, and identify changes they will do to work more successfully in the future.

### **2.1.12 Students' Interaction in Collaborative Learning**

Classroom instructions are increasingly moving away from the traditional teacher-centered or lecture-centered environment. Lessons may not disappear completely, but they will be replaced by alternative processes centered on students' conversation and active work with the course material, rather than lecturing/listening/note-taking ( Laal & Laal, 2012). As well as their own learning, the students are responsible for each other's learning. Learners working towards common learning goals, such as a common understanding of a subject or a solution to an issue, share and transmit knowledge in a collaborative environment. Learners are active participants in their knowledge acquisition process, participating in discussions, searching for information, and exchanging ideas with their peers. Knowledge is co-created and shared among peers, rather than being held by one learner after being obtained via course materials or an instructor. As a result of their reliance on one other's contributions to the debate, the learning process establishes a link between and among learners.

Collaborative learning activities are successful when students are engage in meaningful interaction with each other. When students are actively interacting, they are able to share their prior knowledge and experiences, which helps them to learn at a higher level in the future. It also has a negative impact on the classroom learning process (Sembiring, 2018). The students frequently speak and share their thoughts during the encounter, demonstrating that interaction among group students is an excellent collaborative learning technique. Interaction between members can be improved when they have a good rapport with each other Additionally, students who are involved in a meaningful conversation tend to be better at reading literature. Engaging in meaningful contact also enables them to gain a new knowledge, which leads to a better text understanding (Sembiring, 2018)

### **2.1.13 Collaborative Learning Through Social Media**

Online social sharing and active involvement are at the forefront of Web 2.0 technologies. It is believed to facilitate productive and efficient collaborative learning sessions. There are already a handful of social software applications that provide a number of Web 2.0 characteristics that can support collaborative learning and project-based teamwork (Li et al. 2010). This means it can serve as an aggregation, contextualization and conversation platform as well as a shared asset repository or an activity management system at the same time. In the academic literature, there is a growing consensus that the usage of social media and social networking sites would facilitate collaborative learning. Using social media for collaborative learning encourages students to be more creative, dynamic and research-oriented through the usage of online social media (Ansari & Khan, 2020).

Learners can communicate, discuss information with classmates and instructors, and generate new meaning and comprehension using mobile devices and social media. Furthermore, collaborative learning through social media platforms such as Facebook, e-mail, and Twitter, to mention a few, facilitates learning and knowledge exchange among students, professors, and instructors in real-world situations (Al-Rahmi et al. 2015). A substantial positive correlation has been found between the usage of social media for collaborative learning and online information sharing behavior. As a result, the more intensively students use social media for collaborative learning, the more information exchange occurs between peers (Ansari & Khan, 2020).

### **2.1.14 Constructivist Learning Theory**

The constructivist learning theory is based on the view that learners actively participate in the learning process. The constructivists believe that knowledge is formed based on prior



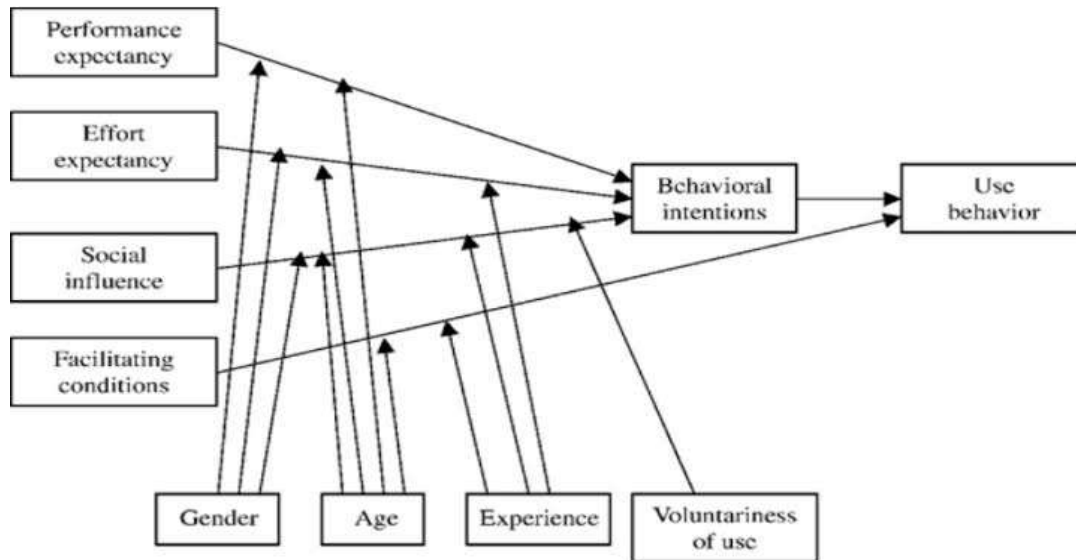
experience. Learners reflect on their experiences and incorporate the new ideas with their past knowledge. Constructivism has dominated educational practice for several decades as a meaning-making ideology that informs instructional activities. Constructivism, in its different incarnations, holds that meaning is made and learned via active engagement with knowledge and social interaction. Constructivist learning paradigm's next significant evolution will be how to employ new media and technical tools in order to facilitate learning. Theories of constructionism mix seamlessly with social media's technological capabilities. Individual and group learning is increased by media that connects people through communities that would otherwise be inaccessible or unreachable without it. To make the most of the current technology revolution, education should challenge long-standing teaching and learning paradigms.

## **2.2. Theoretical Framework.**

To explore the diffusion, acceptability, and adaptability of latest technological breakthroughs, different models and theories have been established. The Unified theory of acceptance and use of technology (UTAUT) was used as the foundation for this study in order to demonstrate individuals' intention to utilize an information technology.

Venkatesh *et al.* (2003) developed UTAUT to predict individual acceptability and implementation of new technology. The degree to which a technology/system is accepted is influenced by four factors: 1) performance expectancy, 2) effort expectancy, 3) social influence, and 4) facilitating conditions. The first three influence individual intention and behavior, whereas the fourth individual behavior. Gender, age, experience, and voluntariness of usage are suggested moderators. In order to develop the theory, Researchers reviewed and consolidated eight models employed to demonstrate technological system usage behavior ( technology

acceptance model, theory of planned behavior, model of personal computer use, social cognitive theory, theory of reasoned action, diffusion of innovation theory, a combined theory of planned behavior/technology acceptance model, motivational theory).



**Figure 2.1: Unified Theory of Acceptance and Use of Technology, Venkatatesh *et al* (2013).**

Performance expectancy: is the assumption that utilizing a specific technology or practice will benefit or improve an individual's performance in some way. The term performance expectancy is similar to TAM's perceived usefulness. Venkatesh et al. (2003) incorporated perceived usefulness, extrinsic motivation, job-fit, relative advantage, and outcome expectancies into the notion of performance expectancy (Vermaut, 2016). Performance expectancy influence an individual's intention to utilise technological tool (Sair & Danish, 2018). This means if students perceived that the use of a technological tool such as social media will contribute meaningfully in enhancing their learning performance, they are more likely to use it.

**Effort expectancy:** is the ease with which a technological tool can be utilized. Thus, effort expectation refers to the effort required to operate the system, regardless of how simple or complex it is. Users could simply embrace and employ a user-friendly technical tool Venkatesh et al. (2003) incorporated three factors from other theories, namely perceived ease of use, complexity, and ease of use, into this idea ( Vermaut, 2016).Effort expectancy also influence an individual's intention to utilized technological tool ( Said & Danish, 2018). This means that if students realized that it is very easy to use technological tool such as social media, they might not refrain from using it.

**Social influence:** When an individual thinks it is important for someone else to feel he/she should make use of a new technological , they are said to have a strong social influence. The three concepts included in social influence are: subjective norm, social factors and image (Vermaut, 2016). A significance positive association exists between social influence and intention to utilise technological tool ( Catherine *et al.* 2017). Social influence positively affect intention to utilise technological tool (Ghalandari, 2012). This means that if students see that people who are important to them will recommend them to utilise social media, it will improve intention to utilise it.

**Facilitating conditions:** The extent to which one feel that the technological tool can be used because there is an organizational and functional structure in place to handle it. A number of factors, such as behavioural control and suitability, contribute to the creation of favorable situations. There are operational facilities (human and material) and adequate technology structures required for students to effectively use social media as a learning tool at their optimal performance level (Onaolapo, & Oyewole, 2018). This implies that If students feel that there are

organizational and functional structures to enable the use of social media in learning, they are more likely to use it.

### **2.3 Empirical Studies**

Bozanta and Martizyn (2017). According to the researchers, the use of social media has permeated various aspects of students' everyday lives. For this, social media could be a useful instrument to promote their academic activities and collaboration with their peers and also academics. The objectives of this paper is to see how social media affects collaborative learning. A theoretical hypothesis is developed for this aim, based on a thorough analysis of the literature. Data is obtained from students at one of Turkey's largest universities via an online questionnaire. The main statistical analytical tool used is structural equation modeling. The data provide strong support for the theoretical hypothesis. In the study, it was found that perceived ease of use is a determinant of perceived usefulness, and both have an influence on the usage of social media by students for academic reasons. The use of social media enhances student peer connection and course participation, as well as student-faculty contact. Lastly, peer contact and course involvement have a strong favorable impact on collaborative learning. The study's findings may be beneficial to students and educators to build programs to support, enhance, and encourage the introduction and use of social media in blended learning classes, and to offer proper training for teachers to improve social media adoption.

Alenazy *et al* (2019). According to the researchers, Various researches have been conducted on the influence of social media on performance due to the rising impact of technology. Literatures on the use of social media for collaborative learning as a strategy to improve co-authoring are rare. Social media use for collaborative learning is explored in this

work in an attempt to validate the technology acceptance model (TAM) in order to improve collaborative authorship among students at the university. A questionnaire was used as the primary data collection strategy in this publication, which was issued to 1118 researchers from the University Technology Malaysia (UTM), who are often active on social media. Structural equation modeling was used to obtain the results (SEM-AMOS). Researchers in higher education used social media to collaborate on writing, and we found that the use of social media was significantly positively correlated to collaborative authoring. Since social media can be used to improve collaborative authorship via collaborative learning, the proposed paradigm should be useful for academics as well as decision-makers.

Al-RahmiAl-Rahmi *et al.* (2015). The purpose of this paper is to describe how social media helps to the advancement of collaborative learning among higher education scholars in Malaysia. There were 723 researchers in the sample. Social media, according to introvert experts, is a valuable tool for strengthening collaborative learning and enhancing their performance, according to the study findings. Instead of meeting face-to-face, some researchers prefer communicating via social media. Social media usage is also common among the surveyed researchers. Social media should be used to enhance collaborative learning in Malaysian higher education institutions. This is done by using the TAM (theory of technology acceptance model). The findings reveal that collaborative learning has a favorable and substantial effect on researchers' intentions for using social media in collaborative learning in order to enhance productivity in Malaysian higher education.

Sarwar *et al.* According to the researchers, In educational contexts, the implementation of new online technologies is fast increasing. It's become vital to comprehend and use social media sites to design future educational strategies, and to also employ present course work on

emerging technologies, due to the growing popularity of social media. Technology Acceptance Model and Constructivism Theory regarding collaborative learning are used in this paper to examine how social media is perceived and used from the standpoint of student collaborative learning and student performance. This study demonstrated that perceived usefulness, ease of use, and perceived enjoyment all have a strong positive association with social media usage, after evaluating the results using Structure Equation Modeling. The findings suggest that social media may be used as a useful device to accelerate the creation of learning spaces through increasing student communication and understanding, which reinforces their study performance. An unfavorable correlation between perceived enjoyment and collaborative learning, on the other hand, was identified. Using cyberbullying as a mediator, the researchers discovered that collaborative learning and learning achievement had a negative correlation.

Al-Rahmi *et al.* (2017). According to the researchers, Social media has always been referred to as a medium for knowledge to be shared between groups. This is not different today as Institutions have been using social media to foster collaborative learning and social engagement among students. Usage of social media in Quran and Hadith learning is examined in this research. Various aspects that enhance collaborative learning in learning Quran and Hadith with the use of social media will be investigated in this study. A total of 340 people took part in the study. Data was analyzed using structural equation modeling. The study developed a model for evaluating the impacts of the variables involved based on the analysis and structural model validity. According to the study, these variables have both direct and indirect influences on collaborative learning through social media, which could result in increased performances by students.

Li (2015). As a part of a social constructivist learning theory-based teacher education program, this study aims to incorporate Wiki, a collaborative platform, into learning within a course. Student-teacher acceptability of the suggested pedagogical approaches was examined in this study, as well as style of learning priorities that would be favorable to welcoming the suggested methodology. 56 student instructors took part in this research project. a wiki was used to facilitate a number of collaborative activities, and they were asked to fill out a questionnaire to gauge their opinion on the relevance of wikis and their approach in using it. and 39 of them also provided a learning - style inventory, which was utilized to determine the learning styles profile of the student-teacher samples. The findings show that the usage of a wiki as a collaborative learning tool in the program is well received. Qualitative data acquired using loose-ended questions yields the same positive results. In terms of embracing the wiki as a learning tool, active learners were shown to be considerably different from reflective learners.

Irwin *et al.* (2012). According to the researchers, Facebook is a prominent social media site that could be used to enhance academic learning. Student attitudes of using Facebook groups in university courses were examined in this study. Four university courses at Griffith University's Gold Coast campus were given their own Facebook accounts, that were used to offer details about the courses and allow for student involvement. n=161, or 93.1 percent, of the students had an active Facebook account, according to a first-semester questionnaire. Many students (n=135, 78.0 percent ) predicted that a Facebook page could well improve their knowledge and skills, through increasing engagement with classmates and teachers, and notifications for course content. A second questionnaire was conducted in the last lecture of semester demonstrating that 81.9 percent of students connected with the course Facebook group at some stages. As a learning aid, however, students' impressions of the site were mixed, with only 51 percent of students saying it

was efficient. In spite of this , a large number of students (n=110, 76.4 percent) suggest it for future classes. As a learning tool, Facebook appears to have the effect of improving collaborative and cooperative learning.

Apeanti & Danso (2013). This study focused on how university students utilized social media. In the 2012/13 academic year, 311 sandwich students at the University of Education, Winneba were randomly selected to participate in an online survey. The results showed that many students seemed to be aware of social media and used it for a number of purposes, including: trying to connect to family members and friends, finding new friends, acquiring or exchanging learning materials, receiving updates of events, posting information, and killing time. As a result, students were reluctant to join or use social media due to concerns about their privacy and computer skills, as well as the rates of Internet connectivity and the amount of time required to use social media. The researchers found that students had a favourable attitude about the use of social media in the classroom. Teachers should use social media because it is fun for them, and students will do better in class with the help of social media. Teachers should also conduct some lectures on social media.

Alshehri & Lally (2019). This paper investigates the perceptions toward the use of social media tools among students to assist in learning at a Saudi Arabian university. Aside from that, the research examined how students are currently using social media in the classroom and what obstacles they might encounter. 42 university students took part in this study. For this study, data was collected via a web-based survey. Overall, students were acquainted with social media and had utilized at least one sort of social media for learning, according to the study's findings Social media was welcomed by all students as a complement to the classroom. However, the findings demonstrated that the most significant impediments to adopting these tools for learning were



distractions, opposition to Islamic religious teaching, privacy concerns, and cyberbullying. The researchers suggested that this study be reproduced at some other Saudi universities to evaluate the factors and challenges that may influence Saudi students' perceptions to use social media to promote learning.

Gloria and Oluwadara (2015). According to the researchers, Teacher preparation and education are critical to generating high quality instructors in the teaching process. Because teachers are change agents who mould the talents of coming generations, this process is difficult and challenging. The world is constantly changing, and so is the school system, and studies have shown that incorporating new and digital technology in the teacher training process is critical. However, in Nigeria, training for teachers, particularly pre-service teachers, to use these technologies is limited. An Instructional Technology course at University of Ibadan, Oyo State, Nigeria, was investigated for simplicity of use and desire to utilize new and digital technologies such as Interactive Whiteboard, Camtasia, Mindmapping tools, and Microsoft suites. 273 teacher trainees in five departments were selected using a purposive sampling technique in the study (Adult Education, Teacher Education, Guidance and Counseling, Special and Kinetics and Health Education). The study addressed three research questions. These technologies are straightforward to utilize for the teaching and learning process for 83% of the teacher trainees, according to the research. 81% of the teachers expect to use these technologies in their future classrooms, according to the results of the survey. They are driven to adopt these technologies because they believe it will enhance their teaching if they receive adequate and appropriate training. In terms of designing educational activities, they find these technologies to be both engaging and versatile.

Prieto, Miguelanez & Garcia-Penalvo (2015). According to the researchers, Understanding of the process of embracing ICTs in formal education environments is a crucial skill for ensuring effective technology integration in schools. This report offers the findings of a descriptive survey on the behavioral intention to adopt mobile learning among students pursuing a Bachelor's Degree in Primary Education. The population consists of students from the University of Salamanca who completed a survey based on the TAM model, enlarged with the constructs of compatibility and resistance to change. This study enlisted the help of 678 people. The findings indicate a relatively favorable attitude regarding the future usage of this methodology. Gender disparities were found to be significant, particularly in the notions of compatibility and resistance to change.

Udenze & Oshionebo (2020). According to the researchers, implementation of innovative media technologies is gradually becoming a trend in the educational setting. Due the expanding growth of social media, it is critical to comprehend and incorporate social media networks into future academic plans. This study looks into how the WhatsApp platform might promote collaborative learning among undergraduate students at the University of Abuja in Gwagwalada, Nigeria. To accomplish this goal, the study was driven by a dual methodological approach. Both a poll and a Focus Group Discussion (FGD) were used. To analyze the data collected from 400 undergraduates, Simple Percentage Tables (SPTs) and Microsoft Office tools were used. Focus group data was analyzed by theme. Technology Acceptance Model (TAM) was used to guide and drive the investigation. Among other things, students use WhatsApp because of "perceived usefulness" and perceived simplicity of use, according to the report. In addition, it was found that the students had created and maintained a class WhatsApp group for a number of purposes, including learning. Generally , the study indicated that class WhatsApp groups

promote collaborative learning to a great level. As a result of this research, it has been found that uploading inappropriate materials on WhatsApp groups is a huge problem for students. There was a clear conclusion in the study: it is crucial to make use of the potentials of WhatsApp for the purpose of enhancing higher education learning.

Phuthong T (2021). According to the researchers, Social-media collaborative learning in higher education has both advantages and disadvantages. University students are experiencing a "new normal" among themselves, and this study attempts to understand why. 371 university students answered a questionnaire for this study, which was conducted on a purposive sample. Applying structural equation modeling and partial least squares to analyze results, the study demonstrated that collaboration and subjective enjoyment were revealed to be the most influential factors. Following our findings, we advocate that academic institutions and others invest in the development of implicit social-media collaboration and learning platforms due to the volatile and changing requirements of social distancing and remote learning.

## **2.4 Summary of Reviewed Literature**

The foregoing sections in the current chapter has focused on the review of literature related to the study. The literature review was presented in three different sections. The first section is the conceptual framework which focused on discussing the key variables of interest of the study: concept and meaning of perception, process of perception, factors that influence human perception, social media, the growth and development of social media, types of social media, commonly used social media sites in teaching and learning, role of social media in learning, concept and definition of collaborative learning, types of collaborative learning, elements of collaborative learning, students' interaction in collaborative learning, and

collaborative learning through social media sites were reviewed. The second section is the theoretical framework. The Unify Theory of Acceptance and Use of Technology (UTAUT) employed in the study was reviewed. In addition, the four key variables of UTAUT ; the performance expectancy, effort expectancy, social influence, and facilitating conditions and how they influence behavioural intention to use information technology were also reviewed in this section. The third section is the empirical studies which focused on the review of literatures related to the study.

## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This study aims to investigate the perception of pre-service teachers towards the utilization of social media for collaborative learning in Federal University of Technology, Minna. The current chapter gives an outline of the procedures for collecting data related to the research questions. It discusses the study design, study population, sampling and sampling techniques, data collection instrument, instrument validity, instrument reliability, data collection methods and data analysis methods.

#### **3.2 Research Design**

A research design is a set of methods and techniques employed by an investigator. It is the blueprint that links the problems of conceptual research with related empirical research. In this study, the cross-sectional survey design was used because it served better to answer the research questions and the purpose of the study. Cross-sectional survey design is a method used to collect data to make inferences about a population of interest at a given time. It is a method of studying a group of people or elements by collecting and analyzing data from elements that are thought to be representative of several people or an entire group of people. Only a portion of the population is surveyed and the results are expected to extend to the entire population.

#### **3.3 Population of the Study:**

Population is a comprehensive group of people, elements, and objects sharing common features that are of interest to the researcher. The common features of the group distinguished them from

other individuals, elements of another group. The target population for this study includes of 473 pre-service teachers studying at undergraduate level at Federal University of Technology, Minna, in the 2019/2020 session.

### **3.4 Sample and Sampling Technique**

A Sample is a subset of elements obtained in a specific way from an existing population. The elements that constitute a sample are the ones that are considered during the study. The study sample was 134 pre-service teachers of the university, which comprises of 76 males and 58 females. Sampling is a statistical process in which certain elements of a population are selected to represent the true characteristics of the population as a whole. The simple random technique was employed to select respondents for the study. This is to ensure that all individuals within the population have equal chances of being selected in the sample.

### **3.5 Instrument for Data Collection**

The survey questionnaire was used to collect data on "pre-service teachers perception towards the utilization of social media for collaborative learning in Federal University of Technology, Minna. The questionnaire used in this study consists of two sections; section A for personal data of respondents, while section B of the The questionnaire consists of 22 question items which were formulated to provide answer to the posed research questions. The first research question consists of item 1-7, the second and third research questions consist of item 8-15, the fourth research question consists of item 15-22. Each item has respond ranging from strongly agreed to strongly disagreed. 4-point likert scale was used to assign score to each item; 4 for strongly agreed, 3 for agreed, 2 for disagreed, 1 for strongly disagreed. Respondents were

then instructed to provide information about their experience in utilising social media for academic activities.

### **3.6 Validity of the Instrument**

The survey questionnaire was validated to ensure that it is appropriate to answer the research questions. It was validated on two different occasions to determine the suitability of the instrument. Question items not suited were thoroughly modified before the questionnaires were administered to respondents for collection of data.

### **3.7 Reliability of the instrument**

The instrument's reliability was determined through a split half test using the odd and even numbered items to obtain two halves. The two halves were administered to a sample of pre-service teachers in the department. Using Cronbach Alpha test, a 0.78 coefficient value was obtained which indicate that the research instrument is reliable.

### **3.8 Method of Data Collection**

After the validation, the questionnaires were administered to the sample of the study. The administration of the questionnaires was carried out with the help of various class representatives in the department. Out of the 150 questionnaires distributed, only 134 were retrieved which represent a return rate of 89.3%.

### **3.9 Method of Data Analysis**

The data collected from the administration of the questionnaire were coded and analyzed on SPSS through descriptive statistics using mean and standard deviation. The mean and standard deviation for each item was determined. The grand mean for all items under each

research question was also determined. Using  $x=2.5$  as the decision mean, items with mean scores less than 2.5 were considered to be perceived negatively(negative perception) by the respondents, while items with mean scores greater than 2.5 were considered to be perceived positively ( positive perception) by the respondents. The analyzed data was then interpreted to answer the research questions.



## CHAPTER FOUR

### 4.0 RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter provides the results and analysis of the quantitative data obtained from the respondents. The chapter also provides discussion of the findings in view of prior research findings and literature, in order to make comparison between the current study and prior studies and literature.

#### 4.2: Demographic Distribution of Sample Based on Gender

S/N	Gender	Number of Respondents
1	Male	76
2	Female	58
3	Total	134

The study consists of a total of 134 pre-service teachers. 150 survey questionnaires were initially administered, but only 134 were retrieved from the respondents which represents a return rate of 89.3%. The questionnaire was structured using 4 point likert scale, ranging from strongly agreed to strongly disagreed. The mean average of the scale was determined to be 2.50 which serve as the decision mean.

### 4.3 Research Question One

What are pre-service teachers' perception towards the utilization of social media for learning?

**Table 4.2: Mean responses of respondent on pre-service teachers' perception towards the utilization of social media for learning.**

S/N	ITEMS	N	$\bar{x}$	SD	Remarks
1	Using social media in learning is useful.	134	2.54	1.27	Positive
2	Social media in learning improves students' active engagement.	134	2.50	1.23	Positive
3	Social media increases opportunities for meaningful learning.	134	2.74	1.18	Positive
4	Social media enable me to learn at my own pace.	134	2.51	1.19	Positive
5	Social media is an appropriate mean to increase our motivation towards learning.	134	2.31	1.23	Negative
6	Social media in learning process saves much time and effort.	134	2.57	1.01	Positive
7	I feel comfortable using social media sites for learning.	134	2.52	1.17	Positive
	<b>Grand Mean</b>		<b>2.53</b>	<b>1.18</b>	<b>Positive</b>

**Decision Mean= 2.5**

Table 4.2 revealed the result on pre-service teachers' perception towards the utilization of social media for learning. Using the decision mean of 2.5, the result shows that the pre-service teachers agreed on all the items except item 5 ( $x=2.31$ ) with mean response less than 2.5. Given that the grand mean of their responses is 2.53, this implies that they have positive perception of utilizing social media as a learning tool.

#### 4.4 Research Question Two

What are pre-service teachers' perception towards the utilization of social media for collaborative learning?

**Table 4.3: Mean responses of respondent on pre-service teachers' perception towards the utilization of social media for collaborative learning.**

S/N	ITEMS	N	$\bar{x}$	SD	Remarks
1	Collaborative learning through social media is interesting.	134	2.80	1.10	Positive
2	I feel motivated when interacting with my course mates.	134	2.59	1.43	Positive
3	Social media sites for classroom discussion is convenient.	134	2.27	1.13	Negative
4	Whenever I participate in learning through social media, we engage each other in question and answers.	134	2.54	1.27	Positive
5	I sometimes post items when using social media to respond to my colleagues' questions.	134	2.56	1.21	Positive
6	I like to comment on any post I received through social media that add value to my learning.	134	2.70	1.25	Positive
7	When using social media for learning, I sometimes get involved in peer tutoring.	134	2.54	1.23	Positive
8	Social media supports collaborative learning with peers.	134	2.57	1.02	Positive
	<b>Grand Mean</b>		<b>2.57</b>	<b>1.21</b>	<b>Positive</b>

**Decision Mean=2.5**

Table 4.3 revealed the result on pre-service teachers' perception towards the utilization of social media for collaborative learning. Using decision mean of 2.5, the result shows that the pre-service teachers agreed on all the items except item 3 ( $\bar{x}=2.27$ ) with mean response less than 2.5.

Given that the grand mean of their responses is 2.57, this implies that they have positive perception of utilizing social media for collaborative learning.

#### 4.5 Research Question Three

What are pre-service teachers perception towards the utilization of social media for collaborative learning based on gender?

**Table 4.4: Mean responses of respondent on pre-service teachers perception towards the utilization of social media for collaborative learning based on gender**

S/N	Gender	N	$\bar{x}$	S.D	Mean Difference
1	Male	76	2.78	1.09	0.21
2	Female	58	2.57	1.18	

Table 4.4 revealed the result on pre-service teachers perception towards the utilization of social media for collaborative learning based on gender. The mean response of male pre-service teachers is 2.78 (SD=1.09), and that of the female pre-service teachers is 2.57 (SD=1.18). Given that the mean response of the male pre-service teachers is higher, this implies that the male pre-service teachers have higher positive perception of social media for collaborative learning than the female pre-service teachers.

#### 4.6 Research Question Four

What are the intentions of pre-service teachers of using social media for teaching in future?

**Table 4.5: Mean responses of respondent on the intentions of pre-service teachers of using social media for teaching in future**

S/N	ITEMS	N	SD	Remarks	
1	Social media will be useful for my teaching.	134	2.77	1.08	<b>Positive</b>
2	Social media will enhance my effectiveness in teaching.	134	2.51	1.10	<b>Positive</b>
3	Social media will increase my productivity in teaching.	134	2.58	1.20	<b>Positive</b>
4	It will be more easier to use social media to carryout my teaching plan.	134	2.77	1.08	<b>Positive</b>
5	Teaching through social media will be more easier for me.	134	2.56	1.09	<b>Positive</b>
6	I intend to use social media regularly for teaching.	134	2.56	1.21	<b>Positive</b>
7	Teachers should adopt the use of social media for teaching.	134	2.70	1.25	<b>Positive</b>
	<b>Grand Mean</b>		<b>2.64</b>	<b>1.14</b>	<b>Positive</b>

**Decision Mean=2.5**

Table 4.5 revealed the result on the intentions of pre-service teachers of using social media for teaching in future. Using 2.5 as decision mean, the result shows that the pre-service teachers agreed on all the items under the research question. Given that the grand mean of their responses

is 2.64, this implies that the pre-service teachers' intention of using social media for teaching is positive.

#### **4.7 Summary of Major Findings**

The findings of the study shows that:

1. The pre-service teachers have positive perception towards the utilization of social media as a learning tool.
2. The pre-service teachers have positive perception towards the utilization of social media for collaborative learning.
3. Male pre-service teachers have higher positive perception of social media for collaborative learning than the female pre-service teachers.
4. The pre-service teachers intention of social media is positive, and they are willing to use it for their teaching.

#### **4.8 Discussion of Result**

Research question one seek to determine pre-service teachers perception towards the utilization of social media as a learning tool. Item 3: the pre-service teachers agreed that social media increases opportunities for meaningful learning ( $x=2.74$ ). Item 6: the pre-service teachers agreed that social media in learning process saves much time and effort ( $x=2.57$ ). Item 1: the pre-service teachers also agreed that using social media in learning is useful ( $x=2.54$ ). However in item 5, they disagreed that social media is an appropriate mean to increase their motivation towards learning. This could be attributed to the fact that there are factors such as pursue for high academic excellence, scholarship that could give them more motivation towards learning. The

mean scores of the seven items range from 2.31 (SD=1.23) to 2.74 (SD=1.18). The grand mean for the pre-service teachers perception of social media as a learning tool was  $\bar{x}=2.53$  (1.18). This generally implies that the pre-service teachers have positive perception towards the utilization of social media for learning. This is in line with prior findings of Apeanti & Danso (2014), Akhiar, Mydin & Kasuma (2017), and Mohammed, Ghazali & Hashim (2018) which revealed that students have positive perception and views regarding the use of social media in learning. Furthermore, this finding is similarly supported by the studies conducted by Alshehri & Lally (2019), and Dogari & Apuke (2019) which find out that the students expressed positive beliefs and opinions regarding the use of social media for learning.

Research question two seek to determine the pre-service teachers perception towards the utilization of social media for collaborative learning. Item 1: the pre-service teachers agreed that collaborative learning through social media is interesting ( $\bar{x}=2.80$ ). Item 6: the pre-service teachers agreed that they like to comment on any post they received through social media that add value to their learning ( $\bar{x}=2.70$ ). Item 8: the pre-service teachers agreed that social media support collaborative learning with peers ( $\bar{x}=2.57$ ). However in item 3, they disagreed that social media for classroom discussion is convenient ( $\bar{x}=2.27$ ). This could be attributed to their experience regarding how students are fully involved in social media sites that may sometimes distract their attention from learning. The mean scores for the eight items range from 2.27 (SD=1.13) to 2.80 (SD=1.10). The grand mean for the pre-service teachers perception of social media for collaborative learning was 2.57 (SD=2.57). This generally implies that the pre-service teachers have positive perception towards the utilization of social media for collaborative learning. This is in line with prior finding of Li (2015) which revealed that students possessed positive perception of the usefulness of Wiki for implementing collaborative learning. Similarly,

the finding of Irwin, Ball, Desbrow & Leveritt (2012) which revealed that students welcome the integration of Facebook into their academic activities and see the benefits of increasing flexibility in communication, interaction and presentation of course content.

Research question three seek to find out which of the two genders has higher perception of social media for collaborative learning. The result shows that the mean response of male pre-service teachers is  $x=2.78$ , while the mean response of the female pre-service teachers  $x=2.57$ . The mean difference between the two mean responses is 0.21. This represents a significance difference between the two means . By implication, it means that the male pre-service teachers have higher positive perception than the female pre-service teachers.

Research question four seek to determine the intentions of pre-service teachers of using social media for teaching. Item 1: the pre-service teachers agreed that social media will be a useful tool for their teaching ( $x=2.77$ ). Item 3: the pre-service teachers agreed that social media will increase their productivity in teaching ( $x=2.58$ ). Item 6: they agreed that they intend to use social media regularly in teaching ( $x=2.56$ ). And in item 2, they agreed that social media will enhance their effectiveness in teaching ( $x=2.51$ ). The mean scores of the seven items range from 2.51 ( $SD=1.10$ ) to 2.77 ( $SD=1.08$ ). The grand mean for the intentions of pre-service teachers is 2.64 ( $SD=1.14$ ). This generally implies that the pre-service teachers intention of social media is positive and they are willing to use it for teaching. This is in line with prior finding of Gloria & Oluwadara (2015) which revealed that the teacher trainees in the study intend to use technologies in their teaching. This is also in line with the finding of the study conducted by Prieto, Miguelenaz & Garcia-Penalvo (2015) which showed that the trainee teachers intended moderate behavior to use mobile technology in future teaching methods.



## CHAPTER FIVE

### 5.0 CONCLUSION AND RECOMMENDATIONS

#### 5.1 Conclusion

The aim of this study is to examine how pre-service teachers perceive social media as a learning tool for collaborative learning. The results of the study show that the pre-service teachers have perceived benefits and usefulness of social media as a learning tool that foster communication, interaction, and collaboration with peers when effectively utilized. The pre-service teachers believe that social media is an effective tool to support collaborative learning with peers, colleagues. Accordingly, they believe that social media can also serve as an effective tool to enhance teachers' efficiency during instruction.

#### 5.2 Recommendations

Based on the findings of the study, the following recommendations were made;

1. The School should provide appropriate guidance and training to pre-service teachers to equip them with the relevant skills necessary to effectively use social media for online learning.
2. Teachers / instructors should be trained to acquire the necessary skills to effectively deliver online learning content through social media.

### **5.3 Limitation of the study**

The study is faced with a number of limitations of methodology and design;

1. The results of the study reflect the opinions and views of a group of students in a department in one university. While the findings do indicate the thoughts and feelings of that sample, they may not be generalized across different populations.
2. The study used a survey questionnaire as the main tool for collecting data. It would have been better and more helpful if interview was also used in addition, to get more perceptions of the pre-service teachers.

### **5.4 Suggestion For Further Study**

For future studies in this area, it is suggested using a large sample size of students from different department of the university, and interview should be employed in addition to survey questionnaire in order to obtain more reliable result which can be generalized to different populations.

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## **Appendices**

**Appendix A:** Total population of Science Education Students.

**Appendix B:** Survey questionnaire.

**Appendix C:** Research instrument validation form.

## Appendix A

### Population of Science Education Students

S/N	Level	Population
1	100	52
2	200	121
3	300	153
4	400	57
5	500	90
6	Total	473

## Appendix B

### QUESTIONNAIRE

#### PRE-SERVICE TEACHERS' PERCEPTION TOWARDS THE UTILIZATION OF SOCIAL MEDIA FOR COLLABORATIVE LEARNING IN FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.

Dear respondent,

I am an undergraduate student of Federal University of Technology, Minna, department of science education. I am conducting a research on "pre-service teachers' perception towards the utilization of social media for collaborative learning". Here is a questionnaire which you are kindly expected to fill appropriately. Please feel free to give response to the questions as your responses are crucial towards achieving the objectives of this study. I assure that the information provided will be treated confidentially and utilized for the purpose of the study.

#### Section A: Demographic Data

Gender: Male ( ), Female ( )

Section B: Please kindly give response to the following questions by ticking (√) using the keys below: Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD).

Research question 1: What are pre-service teachers' perception towards the utilization of social media for learning?

S/N	Items	SA	A	D	SD
1	Using social media in learning is useful.				
2	Social media in learning improves students' active engagement.				

3	Social media increases opportunities for meaningful learning.				
4	Social media enable me to learn at my own pace.				
5	Social media is an appropriate mean to increase our motivation towards learning.				
6	Social media in learning process saves much time and effort.				
7	I feel comfortable using social media sites for learning.				

Research question 2: What are pre-service teachers' perception towards the utilization of social media for collaborative learning?

S/N	Items	SA	A	D	SD
1	Collaborative learning through social media is interesting.				
2	I feel motivated when interacting with my course mates.				
3	Social media sites for classroom discussion is convenient.				
4	Whenever I participate in learning through social media, we engage each other in question and answers.				
5	I sometimes post items when using social media to respond to my colleagues' questions.				
6	I like to comment on any post I received through social media that add value to my learning.				
7	When using social media for learning, I sometimes get involved in peer tutoring.				
8	Social media supports collaborative learning with peers.				

Research question 3: What are the intentions of pre-service teachers of using social media for teaching in future?

S/N	Items	SA	A	D	SD
1	Social media will be useful for my teaching.				
2	Social media will enhance my effectiveness in teaching.				
3	Social media will increase my productivity in teaching.				
4	It will be more easier to use social media to carryout my teaching plan.				
5	Teaching through social media will be more easier for me.				
6	I intend to use social media regularly for teaching.				
7	Teachers should adopt the use of social media for teaching.				


## Appendix C

**RESEARCH INSTRUMENT VALIDATION FORM**

Sir/Ma,

The candidate KOLO TAKUBU with Admission Number 2017/3/67254BE is a student of the department. You are requested to make amends or inputs that will improve the quality of the instrument. Your professional expertise is expected to assist the researcher towards the award of the degree.

Thank you.



Dr. Rabiu M. Bello  
HOD (Signature, Date & Official stamp)

Title of the Research Instrument: Questionnaire: Perception of pre-service teachers towards using digital media for Collaborative learning.

**SECTION A**

1. Appropriateness of the Research Instrument title: Okay, but could be better as suggested below based on his variables in his questionnaire.
2. Suggest amendment if not appropriate: Pre-service teachers' perceptions, utilization and intentions towards the adoption of Social Media for Collaborative learning in NIS.
3. Completeness of Bio-data Information: Okay
4. Suggest inputs if incomplete: —
5. Suitability of items generated: Good
6. Structure of the questionnaire/ test items generated: Satisfactory
7. Structure of the instrument in line with the objectives of the study: Okay
8. Items coverage and distribution across constructs and domains measured: Okay
9. Appropriateness of the instrument in relation to the type of data to be collected: Satisfactory
10. What is the general overview and outlook of the instrument?: Okay
11. Rate the Instrument between 1-10: 8

### RESEARCH INSTRUMENT VALIDATION FORM

Sir/Ma,

The candidate KOOL TAKUO with Admission Number 2017/3/6725482 is a student of the department. You are requested to make amends or inputs that will improve the quality of the instrument. Your professional expertise is expected to assist the researcher towards the award of the degree.

Thank you.

Dr. Rablu M. Bello

HOD (Signature, Date & Official Stamp)




Title of the Research Instrument: Questionnaire: perception of pre-service teachers towards using social media for Collaborative learning (A case study of Fulminia).

#### SECTION A

1. Appropriateness of the Research Instrument title: Appropriate
2. Suggest amendment if not appropriate: \_\_\_\_\_
3. Completeness of Bio-data Information: to include school name OK
4. Suggest inputs if incomplete: School name
5. Suitability of items generated: Revisit
6. Structure of the questionnaire/ test items generated: OK
7. Structure of the instrument in line with the objectives of the study: OK
8. Items coverage and distribution across constructs and domains measured: Adequate
9. Appropriateness of the instrument in relation to the type of data to be collected: Appropriate
10. What is the general overview and outlook of the instrument?: It is okay if corrections effected
11. Rate the instrument between 1-10: 7

SECTION B

Name of the validator: Dr. Abdulrahim Mustahin ✓  
Designation/Rank: Assist. Lecturer  
Name of institution: C. O. F. Muna  
Department/ School: PHYSICS DEPARTMENT  
Telephone No/GSM No: 08186473307  
E-Mail Address: Mustahin42@gmail.com

 00-07-2021

Signature, Date and stamp (if available)